IN THE CLAIMS

1. (Newly amended) A modem interface for transferring data between a high data rate interface and a wireless interface, the modem interface comprising:

a plurality of parallel data highways having frames with time slots for transferring data, the plurality of parallel data highways outputting data to the high data rate interface and the wireless interface in selected time slots, each parallel data highway being at least partially dedicated to a separate function;

at least one of the parallel data highways receiving data from the high data rate interface;

at least one of the parallel data highways having an input configured to receive data from the wireless interface in selected time slots; and

a first processor for controlling data transfer between the plurality of parallel data highways and sending data using a sub-plurality of the parallel data highways; ~~and~~

a second processor sending data using a single one of the parallel data highways; and

one of the first and second processors slaved to the other of the first and second processors.

2. (Original) The modem interface of claim 1 wherein the high data rate interface is an IOM-2 highway.

3. (Original) The modem interface of claim 1 wherein the high data rate interface is a PCM highway.

4. (Previously amended) The modem interface of claim 1 wherein the plurality of parallel data highways includes three parallel data highways.

5. (Previously amended) The modem interface of claim 4 wherein each of the three parallel data highways has a 2 Mb/s data rate.

6. (Newly amended) The modem interface of claim 1 further comprising a plurality of read and write devices, each write device fixedly writing to one of the plurality of parallel data highways and each read device reading data from any of the plurality of parallel data highways.

7. (Newly amended) The modem interface of claim 6 wherein the processor controls each read device so that each read device reads from a selected one of the parallel data highways.

8. (Original) The modem interface of claim 1 wherein the frames have sixteen time slots.

9. (Newly amended) A method for transferring data between a high data rate interface and a wireless interface, the method comprising:

providing a plurality of parallel data highways having frames with time slots for transferring data, each parallel data highway being at least partially dedicated to a separate function;

inputting data to the parallel data highways from the high data rate interface and the wireless interface in selected time slots;

controlling data transfer between the plurality of highways; and

outputting data to the high data rate interface and the wireless interface in selected time slots; and

wherein one of the plurality of parallel data highways only receives data from the high data rate interface and a first processor for sending data using a

sub-plurality of the parallel data highways and a second processor sending data using a single one of the parallel data highways, one of the first and second processors slaved to the other of the first and second processors.

10. (Original) The method of claim 9 wherein the high data rate interface is an IOM-2 highway.

11. (Original) The method of claim 9 wherein the high data rate interface is a PCM highway.

12. (Previously amended) The method of claim 9 wherein the plurality of parallel data highways includes three parallel data highways.

13. (Previously amended) The method of claim 9 wherein each of the three parallel data highways has a 2 Mb/s data rate.

14. (Newly amended) The method of claim 9 wherein the controlling includes using a plurality of read and write devices, each write device fixedly writing to one of the plurality of parallel data highways and each read device reading data from any of the plurality of parallel data highways.

15. (Newly amended) A radio network terminal (RNT) for transferring data between a high data rate interface and a wireless interface, the RNT comprising:

a receiver and a transmitter for transferring data over the wireless interface;

an input and an output for transferring data over the high data rate interface;

a plurality of parallel data highways having frames with time slots for transferring data, the plurality of parallel data highways outputting data to the high data rate interface and the wireless interface in selected time slots, each parallel data highway being at least partially dedicated to a separate function;

at least one of the parallel data highways ~~receive~~ only receiving data from the high data rate interface;

at least one of the parallel data highways having an input configured to receive data from the wireless interface in selected time slots; and

a first processor for controlling data transfer between the plurality of highways and sending data using a sub-plurality of the parallel data highways; and

a second processor sending data using a single one of the parallel data highways; and

one of the first and second processors slaved to the other of the first and second processors.

16. (Previously amended) The RNT of claim 15 wherein the receiver and the transmitter transfer data using QPSK modulation in CDMA format.

17. (Previously amended) The RNT of claim 15 wherein the RNT is operatively coupled to an ISDN terminal via the high data rate interface.

18. (Original) The RNT of claim 15 wherein the frames have sixteen time slots.

19. (Previously amended) The RNT of claim 15 wherein the plurality of parallel data highways includes three parallel data highways.

20. (Original) The RNT of claim 15 wherein the high data rate highway is an IOM-2 highway.

21. (Newly amended) A method of communicating data over a wireless interface of a wireless communication network having a first station and a second station, the method comprising:

producing data having a first high-level data link controlling (HDLC) encoding at the first station for transfer over the wireless interface;

encoding the first HDLC encoded data into a second HDLC format at the first station such that the produced data is double HDLC encoded;

transmitting the double HDLC encoded data over the wireless interface;

receiving the double HDLC encoded data at the second station; and

removing the second HDLC encoding to recover the first HDLC encoded data at the second station, the first HDLC encoding and the second HDLC encoding facilitating error correction over the wireless interface while providing for the integrity of first HDLC encoded data over the wireless interface.

22. (Previously amended) The method of claim 21 wherein the first station is a radio network terminal and the second station is a radio carrier station, the method further comprising:

prior to producing the first HDLC encoded data, receiving the first HDLC encoded data from an IOM-2 highway.

23. (Previously amended) The method of claim 21 wherein the first station is a radio carrier station and the second station is a radio network terminal, the method further comprising:

prior to producing the first HDLC encoded data, receiving the first HDLC encoded data from a PCM highway.